

**Lab 8 – PartIIA The Roles of RNA and Protein Synthesis in  
Pollen Germination And Pollen Tube Growth  
Plant Biology (SC/BIOL 2010.04)  
Winter 2014**

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**One-Page Written Assignment, single spaced (plus calculations, tables, figures, references, etc):**

- There is a lot of information for students to condense here. Page limits are in place as a guideline and TAs are to use their discretion in enforcing the limit. Please mark students based on the succinctness of their writing.

**Introduction (2 marks)**

- Objective(s) of the lab
- Background information with reference
- Hypothesis, types of controls used, variables, etc.
  - o Explain the treatments- what do ActinoD, CycloH, DMSO, and PGM do and why used?

**Results (8 marks total):**

**a) Data Table**

Sample table of data – students can simply submit the raw data they took down in class

**b) T-test (3 marks) – similar to fermentation lab write-up**

- t-test which appropriately tests their stated hypothesis
- state the p-value (0.5 mark) in their written results
- include a print screen (0.5 marks) of their SPSS output.

**c) Written Interpretation of results (2 mark)**

- What does the data indicate?
- Does this conform to or refute hypothesis and why?
- Are suspect values in the data set / potential sources of error?

**d) Tables and Graphs: 3 marks**

**Bar graph of results see**

- Appropriately formatted with axis label, proper units, and captions, error bars

**Conclusion (3 Marks)**

Discuss the role of RNA synthesis and protein synthesis, respectively, in germination and pollen tube growth –should reference peer reviewed literature

**Pollen grain drawing**

- identified correctly to genus/sp.
- properly labelled

**References: 1 mark**

**Total: 15 marks**

